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Subject: Agremax Fact Sheet

Fact Sheet: Salinas / AES

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Contact:
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Issue:

In a September 2010 letter, representatives of the environmental group Earthjustice and a private citizen, Ms. Ruth Santiago, Esq., requested that EPA look into the management of ash generated in Puerto Rico by the AES Guayama coal-fired power plant.

Ms. Santiago said a beneficial use determination for a material known as "Agremax," produced from the ash by AES had been repealed by the Puerto Rico Environmental Quality Board; that the ash had been used in the past as daily cover at the Salinas Municipal Solid Waste Landfill; that Agremax had been used for other purposes in the municipalities of Arroyo, Guayama, and Salinas, and that the Landfill could not adequately handle stormwater runoff and had an unpermitted point source discharge to a mangrove forest in the nearby Jobos Bay. Ms. Santiago urged that EPA utilize its authority under Section 7003 of the Resource Conservation and Recovery Act (RCRA) to conduct groundwater and other monitoring.

Current Status:

As part of our ongoing investigation of AES coal ash disposal, RCB accompanied Ms. Santiago and two local environmental groups in Puerto Rico in June 2011 on site visits to ten areas in which coal ash aggregate from the AES Guayama power plant had been placed on land. The P.R. Environmental Quality Board has issued two Resolutions and Notifications, under which the aggregate is not regulated as a solid waste. Ms. Santiago and the environmental groups claim that this use is not appropriate and may be causing environmental damage. We observed the aggregate, which did not appear physically stable, being used as fill material in great amounts over extensive areas, some in proximity to rivers, streams, and wetlands. In some instances, disposal, rather than beneficial reuse, appeared to be occurring. We met with the P.R. Department of Health to review their groundwater data, obtained from wells near the aggregate sites (no exceedences observed), and spoke at length with EQB, who has since provided us their aquifer ground water data. We have also reviewed ground water data from the P.R. Aqueduct and Sewer Authority (no exceedences observed).

Our intent is to continue to investigate the potential for aquifer and environmental damage from the past and existing use of the aggregate, which will be based on new data we plan to obtain from monitoring of the land placement sites, and, if appropriate, of private drinking water wells in the environmental justice area near several of the sites. We are also aware of analogous damage cases documented by EPA and others. A 2007 EPA report "Coal Combustion Waste Damage Case Assessments" documents known damage cases from the mismanagement of coal ash in unlined landfills and surface impoundments and the subsequent contamination of drinking water aquifers through the leaching and ground water transport of contaminants in the ash. Two EPA Orders, issued in 2003 and 2004 under the Comprehensive Environmental Response, Compensation, and Liability Act, and a subsequent 2004 citizen suit taken under Section 7002 of the Resource Conservation and Recovery Act, address aquifer contamination by the leaching of toxic constituents from an unlined coal ash landfill in Pines, Indiana.

A letter from the RA to EQB Chairman Neives was sent in November 2011, requesting reconsideration of the Resolutions and Notifications for Agremax, to incorporate, among other things, risk evaluation and engineering controls on the end uses.

Our investigation of this issue was also requested by the Office of Resource Conservation and Recovery, in an email to RCRA Compliance Branch Chief George Meyer from the coal combustion residuals rulemaking work group lead (Alex Livniat, PhD, in charge of damage case assessment).

Background:

Salinas Landfill

EPA met with Ms. Santiago in December 2010, and she subsequently provided additional documentation with respect to the Salinas Municipal Solid Waste Landfill, comprising inspection reports by the Puerto Rico Solid Waste Management Authority and various documents developed by EPA and others relating to the Landfill, solid waste management in Puerto Rico, and the potential beneficial uses of coal ash. We determined no further action was necessary based on the information provided.

In September 2010, EPA conducted two inspections of the Salinas Landfill to verify compliance with RCRA and the National Pollutant Discharge Elimination System (NPDES) Multi Sector General Permit (MSGP) for storm water discharges associated with industrial activities. The NPDES inspection confirmed that the facility has coverage under the MSGP, has developed the required Storm Water Pollution Prevention Plan, and that a leachate collection system at the Landfill was in place. No evidence of leachate releases or spill to the storm water collection system was observed. However, a storm water outfall was found to discharge through a pipeline into a ditch that eventually reaches the Jobos Bay, and no evidence of discharge monitoring, consistent with the terms of the NPDES permit, was found. An Administrative Compliance Order was issued in October 2010, requiring implementation of the MSGP, including best management practices for stormwater runoff control, and we will take any necessary further measures to bring the Landfill into compliance with the NPDES MSGP.

During the RCRA inspection, it was discovered that some leachate breakout had occurred in a trench along the Landfill perimeter, and appeared to have been covered with soil. Mr. Miguel Garcia Campos, the environmental manager for Allied Waste Services, which owns the Landfill, subsequently provided documentation that the remaining leachate had been pumped and disposed. In addition, our review of analytical results of leachate and groundwater monitoring by the Landfill revealed that constituent levels are not inconsistent with what would be expected from a municipal solid waste landfill.

EPA met with Mr. Carlos Gonzalez, the coal combustion product manager for AES Puerto Rico. He informed us that the Guayama coal-fired power plant mixes all of its bottom and fly ash with the spent limestone from its air pollution control equipment, to produce 4,000 tons/week of Agremax, an aggregate it ships off-site as a "product" for use in road bed construction, concrete manufacturing, and soil stabilization. These uses would be consistent with the existing Resolutions and Notifications by the Puerto Rico Environmental Quality Board (EQB) concluding Agremax is a product, which EPA confirmed have been, and remain, effective. Mr. Garcia informed us that no ash is or has been disposed at the Landfill, but noted that Agremax had been used several years ago at the Landfill for road bed construction. Additionally, 19,000 tons of Agremax had been recently used to construct a two foot protective cover over the geocomposite liner in a new landfill cell being constructed. Mr. Garcia confirmed that neither Agremax nor ash has been used for daily cover at the Landfill.

Agremax Resolutions and Notifications

The EQB Resolutions and Notifications conclusion that Agremax is a product are based on Agremax not failing the RCRA toxicity characteristic leaching procedure (TCLP), as detailed in a 2007 study and report by the Puerto Rico legislature. EPA has since developed new test methods for evaluating coal combustion residues in the environment, which are currently undergoing validation for incorporation as official EPA test methods (i.e., for publication in EPA document SW-846). EPA has no plan to replace the regulatory uses of the TCLP with the new test methods. Rather, once validated, EPA intends the new test methods to be used where TCLP is not required or best suited, and where waste management or reuse conditions are known, in order to provide an estimate of contaminant release tailored to a particular environmental scenario or defined range of conditions.

In May 2010, EPA published a proposed rule to ensure the safe disposal and management of coal ash. Under the proposed rule, the Agency would continue to promote the beneficial reuses of coal ash, in which coal combustion residuals are recycled as components of products instead of being placed in impoundments or landfills. EPA has yet to issue a final rule, and, until a decision is made, EPA's prior determination that coal ash is a solid waste remains in force. However, it is noted that no RCRA regulatory requirements for coal ash management currently exist, while states may, and have, made binding regulatory determinations on appropriate coal ash management practices.